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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/538,779  | 12/30/2005  | In-Su Joo            | 6192.0590.US        | 5493             |
| 7590  | 01/18/2008  |                      | EXAMINER            |                  |
| McGuireWoods<br>1750 Tysons Boulevard<br>Suite 1800<br>McLean, VA 22102 |             |                      | WEISS, HOWARD       |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2814                |                  |
|   |             |                      | MAIL DATE           | DELIVERY MODE    |
|   |             |                      | 01/18/2008          | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/538,779             | JOO ET AL.          |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Howard Weiss           | 2814                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 10 June 2005.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-6 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-6 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>0605</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

Attorney's Docket Number: 6192.0590.US

Filing Date: 12/30/2005

Continuing Data: 371 of PCT/KR03/02708 (12/11/2003)

Claimed Foreign Priority Date: 12/11/2002 (KRX)

Applicant(s): Joo et al. (Choi)

Examiner: Howard Weiss

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Wei et al. (U.S. Patent No. 5,480,810).

Wei et al. show all aspects of the instant invention (e.g. Figures 1 and 2) including:

- a gate wire formed on an insulating substrate **105** and comprising a gate electrode **122** and a gate line **125**
- a gate insulating layer **140** formed on said gate wire
- a semiconductor layer **156** formed on said gate insulating layer
- a data wire formed on the gate insulating layer and including a data line **165**, a source electrode **162** disposed on said semiconductor layer and a drain electrode **164** separated from said source electrode and disposed on said semiconductor layer
- a photodiode **130** including first **124** and second **138** electrodes with a photo-conductive layer disposed therebetween, said photo-conductive layer comprising N-I-P amorphous, semiconductor Layers **132,134,136**, respectively
- a bias signal line **166** connected to said second electrode
- the semiconductor layer disconnected between the source and drain electrodes

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al. and Lee et al. (EP 0 788 277 A2).

Wei et al. show most aspects of the instant invention (Paragraph 2) except for a light blocking layer covering the photodiode. Lee et al. teach (e.g. Figure 3) to put a light blocking layer **37** above a photosensitive device **10n** to help eliminate the common mode noise (Column 13 Lines 25 and 26). It would have been obvious to a person of ordinary skill in the art at the time of invention to put a light blocking layer above a photosensitive device as taught by Lee et al. in the device of Wei et al. to help eliminate the common mode noise.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al. and Lee et al., as applied to Claim 1 above, and further in view of Lee (U.S. Patent No. 5,895,936).

Wei et al. and Lee et al. show most aspects of the instant invention (Paragraph 4) except for the light blocking layer connected to a bias signal line. Lee teach to connect a light blocking layer **132** with a bias line to not leave any areas uncovered (Column 5 Lines 16 to 20). It would have been obvious to a person of ordinary skill in the art at the time of invention to connect a light blocking layer with a bias line as taught by Lee in the device of Wei et al. and Lee et al. to not leave any areas uncovered.

### ***Conclusion***

6. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(571) 273-8300**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Weiss at **(571) 272-1720** and between the hours of 7:00 AM to 3:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via [Howard.Weiss@uspto.gov](mailto:Howard.Weiss@uspto.gov). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy, can be reached on **(571) 272-1705**.
8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

9. The following list is the Examiner's field of search for the present Office Action:

| <u>Field of Search</u>                     | <u>Date</u>     |
|--|-----------------|
| U.S. Class / Subclass(es): 257/ 59, E27.14 | 15 January 2008 |
| Other Documentation: none                  |                 |
| Electronic Database(s): EAST, IEL          | 15 January 2008 |

HW/hw  
15 January 2008

/Howard Weiss/  
Primary Patent Examiner  
Art Unit 2814